

AMENDMENTS TO THE CLAIMS

1. (Currently amended) An image playback apparatus that reproduces an image in visible form based on input image data representing reflectance values, said image playback apparatus executing a function for automatically changing a dynamic range of at least a part of the reproduced image that has been selected by an action of a viewer viewing the reproduced image,

wherein the at least a part is less than a whole, and

wherein a range of image information of the at least a part of the reproduced image mapped for reproducing is widened compared to a range of image information of a rest of the reproduced image mapped for reproducing when the function for automatically changing the dynamic range of the at least a part of the reproduced image is executed,

wherein the image playback apparatus is configured to select the at least a part of the reproduced image by

generating a histogram of reflectance ratio information of an area specified by the viewer,
and

selecting, as the at least a part of the reproduced image mapped for reproducing, a reflectance ratio area that includes a predetermined percentage of the generated histogram of the reflection ratio information of the area specified by the viewer, and

wherein the predetermined percentage is less than 100%.

2. (Currently amended) An image playback apparatus that reproduces an image in visible form based on input image data representing reflectance values, said image playback apparatus executing a function for automatically changing a tone conversion characteristic of at least a part of the reproduced image that has been selected by an action of a viewer viewing the reproduced image,

wherein the at least a part is less than a whole,

wherein when the function for automatically changing the tone conversion characteristic of

the at least a part of the reproduced image is executed, a range of output values mapped to a range of image information of the at least a part of the reproduced image is wider after executing the function than before executing the function, and

wherein the range of output values mapped to the range of image information of the at least a part of the reproduced image after executing the function is less than an entire range of possible output values,

wherein the image playback apparatus is configured to select the at least a part of the reproduced image by

generating a histogram of reflectance ratio information of an area specified by the viewer,
and

selecting, as the at least a part of the reproduced image mapped for reproducing, a reflectance ratio area that includes a predetermined percentage of the generated histogram of the reflection ratio information of the area specified by the viewer, and

wherein the predetermined percentage is less than 100%.

3. (Currently amended) An image playback apparatus, comprising:

an image data input unit to which image data representing reflectance values is input;

an image output device which reproduces an image in visible form based on the image data received from the image data input unit;

an area specifying device which specifies a desired area from within an image reproduced by the image output device, wherein the desired area has been selected by an action of a viewer viewing the reproduced image;

a tone conversion characteristic varying device which automatically changes a tone conversion characteristic of at least a part of the image containing the area specified by the area specifying device, wherein the at least a part is less than a whole; and

an image processing device which creates the image to be reproduced by the image output

device according to the tone conversion characteristic set by the tone conversion characteristic varying device,

wherein when the tone conversion characteristic varying device automatically changes the tone conversion characteristic of the at least a part of the image, a range of output values mapped to a range of image information of the at least a part of the image is wider after the change than before the change, ~~and~~

wherein the range of output values mapped to the range of image information of the at least a part of the image after the change is less than an entire range of possible output values,

wherein the area specifying device is configured to generate a histogram of reflectance ratio information the desired area, and select, as the at least a part of the image, a reflectance ratio area that includes a predetermined percentage of the generated histogram of the reflection ratio information of the desired area, and wherein the predetermined percentage is less than 100%.

4-6. (Canceled)

7. (Currently amended) A method of enhancing an image in visible form with an image playback apparatus, said method comprising:

reproducing an image in visible form based on input image data representing reflectance values on an image output device; ~~and~~

executing a function for automatically changing a dynamic range of at least a part of the reproduced image that has been selected by an action of a viewer viewing the reproduced image on the image output device, wherein the at least a part is less than a whole,

wherein the step of executing the function for automatically changing the dynamic range comprises widening a range of image information of the at least a part of the reproduced image mapped for reproducing relative to a range of image information of a rest of the reproduced image mapped for reproducing;

generating a histogram of reflectance ratio information of an area specified by the viewer;
and
selecting, as the at least a part of the reproduced image mapped for reproducing, a reflectance ratio area that includes a predetermined percentage of the generated histogram of the reflection ratio information of the area specified by the viewer,
wherein the predetermined percentage is less than 100%.

8-12. (Canceled)

13. (Currently amended) A method of enhancing an image in visible form with an image playback apparatus, said method comprising:

reproducing an image in visible form based on input image data representing reflectance values on an image output device; ~~and~~

executing a function for automatically changing a tone conversion characteristic of at least a part of the reproduced image that has been selected by an action of a viewer viewing the reproduced image on the image output device, wherein the at least a part is less than a whole,

wherein when the function for automatically changing the tone conversion characteristic of the at least a part of the reproduced image is executed, a range of output values mapped to a range of image information of the at least a part of the reproduced image is wider after executing the function than before executing the function, and

wherein the range of output values mapped to the range of image information of the at least a part of the reproduced image after executing the function is less than an entire range of possible output values,

generating a histogram of reflectance ratio information of an area specified by the viewer,
and

selecting, as the at least a part of the reproduced image mapped for reproducing, a reflectance ratio area that includes a predetermined percentage of the generated histogram of the reflection ratio information of the area specified by the viewer, and
wherein the predetermined percentage is less than 100%.

14.-18. (Canceled).

19. (Previously presented) The image playback apparatus according to claim 1, wherein the image information of the reproduced image mapped for reproducing is reflectance ratio information of the reproduced image.

20. (Previously presented) The image playback apparatus according to claim 2, wherein the image information of the reproduced image mapped for reproducing is reflectance ratio information of the reproduced image.

21. (Previously presented) The image playback apparatus according to claim 3, wherein the image information of the reproduced image mapped for reproducing is reflectance ratio information of the reproduced image.

22. (Previously presented) The method of according to claim 7, wherein the image information of the reproduced image mapped for reproducing is reflectance ratio information of the reproduced image.

23. (Previously presented) The method of according to claim 13, wherein the image information of the reproduced image mapped for reproducing is reflectance ratio information of the reproduced image.

24. (Previously presented) The image playback apparatus according to claim 1, wherein the image playback apparatus displays the whole of the reproduced image according to the mapping of the image information for reproducing the at least a part of the reproduced image.

25. (Previously presented) The image playback apparatus according to claim 2, wherein the image playback apparatus displays the whole of the reproduced image according to the mapping of the image information for reproducing the at least a part of the reproduced image.

26. (Previously presented) The image playback apparatus according to claim 3, wherein the image processing device creates the whole of the image to be reproduced by the image output device according to the mapping of the image information for reproducing the at least a part of the reproduced image.

27. (Previously presented) The method of according to claim 7, further comprising displaying the whole of the reproduced image according to the mapping of the image information for reproducing the at least a part of the reproduced image.

28. (Previously presented) The method of according to claim 13, further comprising displaying the whole of the reproduced image according to the mapping of the image information for reproducing the at least a part of the reproduced image.

29-31. (Canceled)

32. (Currently amended) An image playback apparatus that reproduces an image in visible form based on input image data representing reflectance values, said image playback apparatus executing a function for automatically changing a dynamic range of at least a part of the reproduced image that has been selected by an action of a viewer viewing the reproduced image,

wherein the at least a part is less than a whole, and

wherein the input image data is raw image data that has not yet been subjected to any lossy compression/decompression processing,

wherein the image playback apparatus is configured to select the at least a part of the reproduced image by

generating a histogram of reflectance ratio information of an area specified by the viewer,
and

selecting, as the at least a part of the reproduced image mapped for reproducing, a reflectance ratio area that includes a predetermined percentage of the generated histogram of the reflection ratio information of the area specified by the viewer, and
wherein the predetermined percentage is less than 100%.

33. (Currently amended) An image playback apparatus that reproduces an image in visible form based on input image data representing reflectance values, said image playback apparatus executing a function for automatically changing a tone conversion characteristic of at least a part of the reproduced image that has been selected by an action of a viewer viewing the reproduced image,

wherein the at least a part is less than a whole, ~~and~~
wherein the input image data is raw image data that has not yet been subjected to any lossy compression/decompression processing,

wherein the image playback apparatus is configured to select the at least a part of the reproduced image by

generating a histogram of reflectance ratio information of an area specified by the viewer,
and

selecting, as the at least a part of the reproduced image mapped for reproducing, a reflectance ratio area that includes a predetermined percentage of the generated histogram of the reflection ratio information of the area specified by the viewer, and

wherein the predetermined percentage is less than 100%.

34. (Currently amended) An image playback apparatus, comprising:
an image data input unit to which image data representing reflectance values is input;
an image output device which reproduces an image in visible form based on the image data received from the image data input unit;
an area specifying device which specifies a desired area from within an image reproduced by the image output device, wherein the desired area has been selected by an action of a viewer viewing the reproduced image;

a tone conversion characteristic varying device which automatically changes a tone conversion characteristic of at least a part of the image containing the area specified by the area specifying device, wherein the at least a part is less than a whole; and

an image processing device which creates the image to be reproduced by the image output device according to the tone conversion characteristic set by the tone conversion characteristic varying device,

wherein the image data input to the image data input unit is raw image data that has not yet been subjected to any lossy compression/decompression processing,

wherein the area specifying device is configured to
generate a histogram of reflectance ratio information the desired area, and
select, as the at least a part of the image, a reflectance ratio area that includes a predetermined
percentage of the generated histogram of the reflection ratio information of the desired area, and
wherein the predetermined percentage is less than 100%.

35. (Currently amended) A method of enhancing an image in visible form with an image playback apparatus, said method comprising:

reproducing an image in visible form based on input image data representing reflectance values on an image output device; and

executing a function for automatically changing a dynamic range of at least a part of the reproduced image that has been selected by an action of a viewer viewing the reproduced image on the image output device, wherein the at least a part is less than a whole,

wherein the input image data is raw image data that has not yet been subjected to any lossy compression/decompression processing,

generating a histogram of reflectance ratio information of an area specified by the viewer,
and

selecting, as the at least a part of the reproduced image mapped for reproducing, a reflectance
ratio area that includes a predetermined percentage of the generated histogram of the reflection ratio
information of the area specified by the viewer,

wherein the predetermined percentage is less than 100%.

36. (Currently amended) A method of enhancing an image in visible form with an image playback apparatus, said method comprising:

reproducing an image in visible form based on input image data representing reflectance values on an image output device; and

executing a function for automatically changing a tone conversion characteristic of at least a part of the reproduced image that has been selected by an action of a viewer viewing the reproduced image on the image output device, wherein the at least a part is less than a whole,

wherein the input image data is raw image data that has not yet been subjected to any lossy compression/decompression processing;

generating a histogram of reflectance ratio information of an area specified by the viewer,
and

selecting, as the at least a part of the reproduced image mapped for reproducing, a reflectance ratio area that includes a predetermined percentage of the generated histogram of the reflection ratio information of the area specified by the viewer,

wherein the predetermined percentage is less than 100%.